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ACUC Guidelines

Please ensure that you and your staff review all pertinent ACUC guidelines as they relate to your animal research activities. The guidelines can be found at <http://web.ncifcrf.gov/rtp/lasp/intra/acuc/fred/guidelines.nci.asp>

New/Revised LASP Standard Operating Procedures

Below is a listing of new and/or revised LASP Standard Operating Procedures. Please contact your Facility Manager if you require copies for your staff and/or have any questions as to how these SOPs relate to your animal research activities.

4.010 Handling, Storage, and Disposal of Hazardous Agents in Mice NEW

3.009 Movement of Animals Between Facilities

4.003 Administration of Chemical Carcinogens to Animals

Body Weight Dosing

The convention in veterinary medicine is to express doses in mg/kg or mg/lb of body weight. Since research endeavors generally use the metric system the ACUC prefers that doses be presented on the basis of mg/kg body weight. By presenting the dose in this manner, it is easy to compare proposed doses with those in the literature. It is also important to remember that there can be profound differences in effect of a toxic agent based upon small differences in dose. Thus, it is important with anticancer compounds or other toxic agents that doses be as accurate as possible. This is not easily achieved by giving all mice a dose volume nor by preparing individual dose solutions.

One means to administer compounds on the basis of body weight is to prepare a dosing solution that is based on giving a specific volume per unit of body weight. A simple one to use that does not require significant mathematical prowess at the time of drug dosing is to administer dose solutions at the rate of 10 ml/kg of body weight. Since we generally deal with rodents and grams [rather than kg] the easy to remember rule of thumb is to administer **0.1 ml/10 grams of body weight**. If you use this dose volume then there are no calculations required to determine the volume to give each mouse. You simply draw up in tenths of ml the weight of the mouse in grams. So, a 20 gram mouse would receive 0.2 ml of dose solution, a 25 gram mouse would receive 0.25 ml.

In this way multiple mice can be dosed easily provided their body weight does not exceed 100 grams. You simply fill a 1 cc syringe with the volume required and administer based upon the weight reductions as you remove the mice from the weighing device. As an example:

Four mice to be dosed are placed into a weighing device and the weight

registers as 96 grams. You draw up 0.96 ml of dose solution. Remove the first mouse from the weighing device and the weight goes to 72 grams so you give the first mouse down to 0.72 ml of the dose solution. Repeat this with each subsequent mouse until the last mouse is dosed at which point the syringe should be empty.

Obviously when using body weight based dosing volumes, the dosing solution must be prepared at the appropriate concentration. As an example:

For a dose volume of 0.1 ml/10 grams body weight the dose solution should be prepared as: Dose solution in mg/ml = 0.1 x the desired dose in mg/kg. So to administer 50 mg/kg of a compound using a dose volume of 0.1 ml/10 gm body weight you would prepare the test material at a concentration of 5 mg/ml, administer on the basis of exact body weight, and thus each mouse would receive exactly the correct dose rather than an averaged dose.

To confirm this simply confirm the math as follows:

50 mg/kg of body weight = 50 mg/1000 gm of body weight or 0.05 mg/1 gm = 0.5 mg/10 gm of body weight; therefore you need to have 0.5 mg of drug in each 0.1 ml of solution since you want to administer 0.1 ml/ 10 gm of body weight and you need to give 0.5 mg of drug for each 10 gm of body weight. 0.5 mg/0.1 ml = 5 mg/ml. Therefore a 5 mg/ml solution administered at the rate of 0.1 ml/10gm of body weight will result in a treatment dose of 50 mg/kg.

Failure to dose animals according to body weight can result in inconsistent and misleading data interpretations. Additional guidance can be found at:

<http://web.ncifcrf.gov/rtp/lasp/intra/acuc/fred/guidelines/ACUC39.00Dosing.pdf>

NCI-Frederick Animal Care and Use Links

[Home Page](#)
[Guidelines and Recommendations](#)
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[Training](#)
[Forms](#)

The ACUC is always interested in new members to assist the committee. If you are willing to volunteer as an ACUC member or to participate in any of its subcommittees, please contact the [NCI-Frederick ACUC Office](#)

Regulations and Policies Links

[Animal Welfare Act](#)
[Public Health Service Policy](#)
[Guide for the Care and Use of Laboratory Animals](#)
[U.S. Government Principles](#)



Mouse Parvovirus [MPV]/Mouse Norovirus [MNV] Presentation

On February 28, Dr. William Shek [Charles River Laboratories] presented a lecture on "Prevention and Detection of Adventitious Infections of Mice with Mouse Parvovirus [MPV] and Murine Norovirus [MNV]" for interested attendees. The presentation has been posted on the following site:

<http://web.ncifcrf.gov/rtp/lasp/intra/uc/fred/proposal.asp>

IBC Registration – Transgenic/Knockout Animal Models

Due to changes in Institutional Biosafety Committee [IBC] requirements, your Animal Study Proposal [ASP] may require an IBC registration that was not previously needed. The IBC now requires review of all animal-related activities involving:

- NEW** *Transgenic/knockout animal models [regardless of where the animals were generated]*
- *Human [or other primate] materials*
 - *Recombinant DNA*
 - *Transfected cell lines*
 - *Other potentially infectious materials*

If you have any questions or concerns regarding whether or not IBC registration is required for new or renewal ASP submissions ... please contact Cara Leitch [301-846-7299] or Theresa Bell [301-846-5038] in the IBC Office for guidance.

NCI-Frederick ASP Form Template

Please be sure to download and utilize the latest version of the NCI-Frederick Animal Study Proposal form for all future submissions [new and renewals].

<http://web.ncifcrf.gov/rtp/lasp/intra/uc/fred/proposal.asp>

Upcoming ACUC Meeting Dates and ASP Deadlines

MEETING DATES	ASP SUBMISSION DEADLINES
April 19	March 29
May 17	April 26
June 21	May 31
July 19	June 28

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